What is claimed is:

1. A liquid crystal display projector including: a liquid crystal panel having microlenses for focusing incoming light on effective display area portions of pixels, the liquid crystal panel for changing a locus of a resultant electric field vector of light passing through liquid crystal molecules according to a voltage applied to the liquid crystal molecules; a polarizer for allowing linearly polarized light, which is contained in light emitted from a light source, to enter into the liquid crystal panel; and an analyzer for allowing linearly polarized light, which is contained in light exiting from the liquid crystal panel, to enter into a projection optical system, the apparatus comprising:

an optical compensator located between the liquid crystal panel and the analyzer on a light exit side of the liquid crystal panel, the optical compensator for compensating for an optical phase difference caused by liquid crystal molecules in a light-entry-side region of a liquid crystal layer.

2. A liquid crystal display projector according to claim 1, wherein a phase difference film having birefringence only in a plane parallel to a film surface is located at an angle to a panel surface of the liquid crystal panel so as to function as the optical compensator.

3. A liquid crystal display projector according to claim 2, wherein either a phase delay axis or a phase advance axis of the phase difference

film is perpendicular to a polarization axis of the polarizer, and the phase difference film is inclined about an axis parallel to the polarization axis of the polarizer.

4. A liquid crystal display projector according to claim 2, wherein either the phase delay axis or the phase advance axis of the phase difference film is perpendicular to a polarization axis of the analyzer, and the phase difference film is inclined about an axis parallel to the polarization axis of the analyzer.

5. A liquid crystal display projector according to claim 1, wherein a phase difference film having birefringence in planes parallel and perpendicular to a film surface is located parallel to the panel surface of the liquid crystal panel so as to function as the optical compensator.

6. A method of improving contrast of a liquid crystal projector apparatus including: a liquid crystal panel having microlenses for focusing incoming light on effective display area portions of pixels, the liquid crystal panel for changing a locus of a resultant electric field vector of light passing through liquid crystal molecules according to a voltage applied to the liquid crystal molecules; a polarizer for allowing linearly polarized light, which is contained in light emitted from a light source and has one direction of vibration, to enter into the liquid crystal panel; and an analyzer for allowing linearly polarized light, which is contained in light exiting from

the liquid crystal panel and has one direction of vibration, to enter into a projection optical system, the method comprising:

a first step of locating a first phase difference film between the liquid crystal panel and the analyzer, the first phase difference film having birefringence only in a plane parallel to a film surface and inclined at an angle to a panel surface of the liquid crystal panel;

a second step of checking transmittance of light exiting from the liquid crystal panel through pixels to display black when the exiting light passes through the analyzer, while varying an angle of inclination of the first phase difference film, and then determining the angle of inclination according to the magnitude of the transmittance;

a third step of calculating the magnitude of retardation of the first phase difference film in planes parallel and perpendicular to the panel surface, when the first phase difference film has the angle of inclination determined by the second step; and

a fourth step of locating a second phase difference film instead of the first phase difference film between the liquid crystal panel and the analyzer in parallel with the panel surface, the second phase difference film having birefringence in planes parallel and perpendicular to a film surface and having the magnitude of retardation in the planes parallel and perpendicular to the film surface which is approximately equal to the magnitude of retardation in the planes parallel and perpendicular to the panel surface calculated by the third step.

7. A method of improving contrast according to claim 6, wherein, in the first step, either a phase delay axis or a phase advance axis of the first phase difference film is made perpendicular to a polarization axis of the polarizer, and the first phase difference film is inclined about an axis parallel to the polarization axis of the polarizer.

8. A method of improving contrast according to claim 6, wherein, in the first step, either the phase delay axis or the phase advance axis of the first phase difference film is made perpendicular to a polarization axis of the analyzer, and the first phase difference film is inclined about an axis parallel to the polarization axis of the analyzer.

9. A method of improving contrast according to claim 6 further including a fifth step of making fine adjustment of a rotational angle position of the second phase difference film in the plane parallel to the film surface.

10. A liquid crystal display projector comprising:

a light source for emitting light required for image display;

a transmission type liquid crystal display device having a liquid crystal layer having an alignment of a plurality of twisted liquid crystal molecules, the liquid crystal display device for selectively applying a voltage to the liquid crystal layer in response to an image signal, thereby realigning the liquid crystal molecules and thus modulating light passing

through the liquid crystal layer;

a projection lens for projecting the light modulated by the liquid crystal display device;

a polarizer for allowing linearly polarized light, which is contained in light emitted from the light source, to enter into the liquid crystal display device;

an analyzer for allowing linearly polarized light, which is contained in light exiting from the transmission type liquid crystal display device, to enter into the projection lens; and

a first optical compensator located between the liquid crystal display device and the analyzer on a light exit side of the liquid crystal display device and containing a substance having birefringence equivalent to birefringence of a negative crystal, the first optical compensator for compensating for an optical phase difference caused by liquid crystal molecules in a light-entry-side region of the liquid crystal layer.

11. A liquid crystal display projector according to claim 10, wherein, in a state in which a voltage is applied to the liquid crystal layer, the liquid crystal molecules in the liquid crystal layer are realigned so that the major axes of the molecules change in position from a position parallel or about parallel to a plane of incidence of light to a position perpendicular or about perpendicular to the plane of incidence of light as they are situated farther from the light-entry-side and light-exit-side regions of the liquid crystal layer and closer to the center of the liquid crystal layer; and a

plurality of molecules constituting the substance having the birefringence in the first optical compensator are aligned according to the alignment of the liquid crystal molecules in a voltage-applied state so that the optic axes of the molecules change in position from a position perpendicular or about perpendicular to the plane of incidence of light to a position parallel or about parallel to the plane of incidence of light as they are situated farther from the light entry side and closer to the light exit side.

12. A liquid crystal display apparatus according to claim 10 further comprising a second optical compensator located on the light exit side with respect to the liquid crystal display device and containing a substance having birefringence equivalent to birefringence of a negative crystal, the second optical compensator for compensating for an optical phase difference caused by liquid crystal molecules in the light-exit-side region of the liquid crystal layer.

13. A liquid crystal display projector according to claim 12, wherein, in a state in which a voltage is applied to the liquid crystal layer, the liquid crystal molecules in the liquid crystal layer are realigned so that the major axes of the molecules change in position from a position parallel or about parallel to a plane of incidence of light to a position perpendicular or about perpendicular to the plane of incidence of light as they are situated farther from the light-entry-side and light-exit-side regions of the liquid crystal layer and closer to the center of the liquid crystal layer; and a

plurality of molecules constituting the substance having the birefringence in the second optical compensator are aligned according to the alignment of the liquid crystal molecules in a voltage-applied state so that the optic axes of the molecules change in position from a position perpendicular or about perpendicular to the plane of incidence of light to a position parallel or about parallel to the plane of incidence of light as they are situated farther from the light exit side and closer to the light entry side.

14. A liquid crystal display projector according to claim 10, wherein a plurality of microlenses for focusing incoming light on the liquid crystal layer are provided close to the light entry side of the liquid crystal layer.

15. A liquid crystal display projector according to claim 10, wherein the polarizer and the analyzer are located so that the crossed Nicols holds.

16. A liquid crystal display projector according to claim 10 further comprising a third optical compensator located on the light exit side with respect to the liquid crystal display device, the third optical compensator for compensating for an optical phase difference caused by liquid crystal molecules present in a region of the liquid crystal layer excluding the light-entry-side region and the light-exit-side region.

17. A liquid crystal display projector according to claim 16, wherein the third optical compensator contains a substance having birefringence equivalent to birefringence of a negative uniaxial crystal.

18. A liquid crystal display projector according to claim 17, wherein each of the liquid crystal molecules in the liquid crystal layer has birefringence equivalent to birefringence of a positive uniaxial crystal; in a state in which a voltage is applied to the liquid crystal layer, the liquid crystal molecules in the liquid crystal layer are realigned so that the major axes of the molecules change in position from a position parallel or about parallel to a plane of incidence of light to a position perpendicular or about perpendicular to the plane of incidence of light as they are situated farther from the light-entry-side and light-exit-side regions of the liquid crystal layer and closer to the center of the liquid crystal layer; the third optical compensator functions to compensate for an optical phase difference caused by light entering into the liquid crystal molecules aligned with the major axes thereof perpendicular to the plane of incidence of light, at an angle to the major axes thereof; and, in a state in which a voltage is applied to the liquid crystal layer, molecules of the substance constituting the third optical compensator and having the birefringence are aligned so that the optic axes of the molecules are parallel to the major axes of the liquid crystal molecules to be compensated for.

19. A liquid crystal display projector according to claim 16,

wherein a plurality of microlenses for focusing incoming light on the liquid crystal layer are provided close to the light entry side of the liquid crystal layer.

20. A liquid crystal display projector according to claim 16 further comprising a pair of polarizers located on the light entry side and the light exit side with respect to the liquid crystal display device and located so that the crossed Nicols holds,

wherein the first optical compensator and the second optical compensator are located between the polarizer located on the light exit side and the liquid crystal display device.